WHAT IS CLAIMED IS:

1   1. A stereo camera system comprising:

2   a stereo imaging means for outputting at

3 least one stereo image;

4   recognition means for locating an object of

5 interest in the field of view of the stereo imaging means

6 and at least one of a distance of the object of interest

7 from the stereo imaging means and the size of the object

8 of interest; and

9   adjusting means for automatically changing

10 at least one system parameter which affects the spatial

11 resolution of the object of interest based on at least

12 one of the located distance of the object of interest

13 from the stereo imaging means and the size of the object

14 of interest.

1   2. The stereo camera system of claim 1,

2 wherein the stereo imaging means comprises:

3   a camera; and

4   a set of mirrors angled with respect to each

5 other at a predetermined angle and disposed a

6 predetermined distance from the camera for producing a

7 stereo effect in the output of the camera.

1   3. The stereo camera system of claim 2,

2 wherein the camera is a still camera and the at least one

3 stereo image is a still image.

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1   4.   The stereo camera system of claim 2,
2 wherein the camera is a video camera and the at least one
3 stereo image is a sequence of video images.

1   5.   The stereo camera system of claim 2,
2 wherein the adjusting means comprises at least one of:
3   angle adjustment means for adjusting the
4 predetermined angle between the set of mirrors;
5   distance adjustment means for adjusting the
6 predetermined distance between the camera and the set of
7 mirrors; and
8   focal length adjustment means for changing a
9 focal length of the camera.

1   6.   The stereo camera of claim 5, further
2 comprising a controller for controlling at least one of
3 the angle, distance, and focal length adjustment means
4 based on an input signal from the recognition means.

1   7.   The stereo camera system of claim 1,
2 wherein the stereo imaging means comprises two or more
3 cameras, each camera being angled a predetermined angle
4 and distanced a predetermined distance with respect to
5 each other and the object of interest.

1   8.   The stereo camera system of claim 7,
2 wherein the two or more cameras are still cameras and the
3 at least one stereo image is a still image.

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1   9.   The stereo camera system of claim 7,
2 wherein the two or more cameras are video cameras and the
3 at least one stereo image is a sequence of video images.

1   10.   The stereo camera system of claim 7,
2 wherein the adjusting means comprises at least one of:
3   angle adjustment means for adjusting the
4 predetermined angle of at least one of the two or more
5 cameras;
6   baseline adjustment means for adjusting the
7 predetermined distance between the two or more cameras;
8   distance adjusting means for adjusting a
9 distance between at least one of the two or more cameras
10 and the object of interest; and
11   focal length adjustment means for changing a
12 focal length of at least one of the two or more cameras.

1   11.   The stereo camera of claim 10, further
2 comprising a controller for controlling at least one of
3 the angle, baseline, distance, and focal length
4 adjustment means based on an input signal from the
5 recognition means.

1   12.   The stereo camera system of claim 1,
2 wherein the recognition means is a stereo vision system.

1   13.   A stereo camera system for use with a
2 stereo imaging means, the stereo imaging means outputting

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3   at least one stereo image, the stereo camera system

4   comprising:

5   recognition means for locating an object of

6   interest in the field of view of the stereo imaging means

7   and at least one of a distance of the object of interest

8   from the stereo imaging means and the size of the object

9   of interest; and

10   adjusting means for automatically changing

11   at least one system parameter which affects the spatial

12   resolution of the object of interest based on at least

13   one of the located distance of the object of interest

14   from the stereo imaging means and the size of the object

15   of interest.

1   14. The stereo camera system of claim 13,

2   wherein the stereo imaging means comprises:

3   a camera; and

4   a set of mirrors angled with respect to each

5   other at a predetermined angle and disposed a

6   predetermined distance from the camera for producing a

7   stereo effect in the output of the camera.

1   15. The stereo camera system of claim 14,

2   wherein the adjusting means comprises at least one of:

3   angle adjustment means for adjusting the

4   predetermined angle between the set of mirrors;

5   distance adjustment means for adjusting the

6   predetermined distance between the camera and the set of

7   mirrors; and

8   focal length adjustment means for changing a

9 focal length of the camera.

1   16. The stereo camera of claim 15, further

2 comprising a controller for controlling at least one of

3 the angle, distance, and focal length adjustment means

4 based on an input signal from the recognition means.

1   17. The stereo camera system of claim 13,

2 wherein the stereo imaging means comprises two or more

3 cameras, each camera being angled a predetermined angle

4 and distanced a predetermined distance with respect to

5 each other.

1   18. The stereo camera system of claim 17,

2 wherein the adjusting means comprises at least one of:

3   angle adjustment means for adjusting the

4 predetermined angle of at least one of the two or more

5 cameras;

6   distance adjustment means for adjusting the

7 predetermined distance between the two or more cameras;

8 and

9   focal length adjustment means for changing a

10 focal length of at least one of the two or more cameras.

1   19. The stereo camera of claim 18, further

2 comprising a controller for controlling at least one of

3 the angle, distance, and focal length adjustment means

4 based on an input signal from the recognition means.

1   20. The stereo camera system of claim 1,

2 wherein the recognition means is a stereo vision system.

1   21. A method for adjusting a stereo camera

2 system to control spatial resolution of an object of

3 interest in the field of view of a stereo imaging means,

4 the method comprising the steps of:

5   outputting at least one image from the

6 stereo imaging means;

7   locating an object of interest in the field

8 of view of the stereo imaging means and at least one of

9 the distance of the object of interest from the stereo

10 imaging means and the size of the object of interest; and

11   automatically changing at least one system

12 parameter which affects the spatial resolution of the

13 object of interest based on at least one of the located

14 distance of the object of interest from the stereo

15 imaging means and the size of the object of interest.